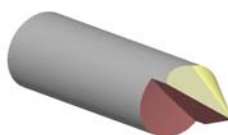



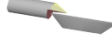
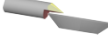
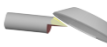
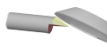
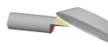
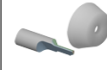






Engraving Cutter Ø0.1 Z1 V 40°

A18-015

The engraving cutter with tip diameter of 0.1 mm is ground from a solid carbide bar of Ø 6 mm. The finishing operations on the cutting face, OD first clearance and End are done with a D20 wheel, executed in oscillations with partial increments. The backclearance on OD is generated through rotation with radial increment.



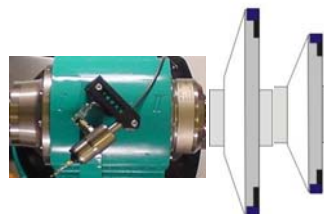
1. Cycletime for Production

Workpiece: Shank-Ø 6 mm, Length Flute 12 mm, V-angle 40° Material CARBIDE							
Operations							
Probe	2000	20	250	120	80	400	400
Feed [mm/Min]		3	2	1	1	2	1
Power [kW]		32	32	32	32	32	32
Cutting speed [m/s]							
Used wheels		1	2	2	2	2	2
Grinding time [s]	12	57	28	59	29	36	28
Total cycle time	4 Min 8						

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	12C9 Ø125 D64
2	12C9 Ø150 D20



2 1

3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG **Coolant:** Synthetic Oil, pressure 6 bar
Control: Fanuc 31i **Software:** Quinto 5
Accessories:
Responsible engineer: OP. 9.1.2012

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